UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,792	10/27/2003	Osamu Kizaki	244412US2	1061

22850   7590   07/31/2008
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
ZHENG, JACKY X

ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
07/31/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *March 12, 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28-37* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *28-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *October 27, 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   Applicant's request for reconsideration of the finality of the rejection of the last Office

action is acknowledged and, the finality of that action is withdrawn as a courtesy. Instant office

action is thus in response to applicant's amendments and/or remarks filed on March 12, 2008 and

October 29, 2007.

2.   **Claims 1-27** have currently been <u>cancelled</u>.

3.   **Claims 28-37** are <u>newly added</u>.

4.   **Claims 28-37** is <u>pending</u>.

5.   The rejections under 35 U.S.C. §112, first paragraph, to Claims 10-23 are <u>withdrawn</u> in

view of Applicant's <u>cancellation</u> of claims 1-27.

6.   The rejections under 35 U.S.C. §112, Second Paragraph, to Claims 3, 9, 11-23 and 25-27

are <u>withdrawn</u> in view of Applicant's <u>cancellation</u> of claims 1-27.

7.   The rejections under 35 U.S.C. §102 to Claims 1-17, 22-24 and 26 are <u>withdrawn</u> in view

of Applicant's <u>cancellation</u> of claims 1-27.

8.   The rejections under 35 U.S.C. §103 to Claims 18-21, 25 and 27 are <u>withdrawn</u> in view

of Applicant's <u>cancellation</u> of claims 1-27.

Double Patenting

9.   The nonstatutory double patenting rejection is based on a judicially created doctrine
grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or
improper timewise extension of the "right to exclude" granted by a patent and to prevent possible
harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection
is appropriate where the conflicting claims are not identical, but at least one examined
application claim is not patentably distinct from the reference claim(s) because the examined
application claim is either anticipated by, or would have been obvious over, the reference
claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10.   **Claims 28, 31, 34 and 35** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, 7 and 9 correspondingly of U.S. Patent No. 7,301,653. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter claimed in the instant application is fully disclosed in US Patent 7,301,653, and the scopes of the independent claims 28 and 34, as well as the corresponding dependent claims (as indicated below in table) of instant application are substantially overlapping with ones of claims 1 and 7, as well as the corresponding dependent claims of US Patent 7,301,653. A detailed comparison of the claims language and limitations are illustrated and provided in details below.

Claims in Instant Pending Application	**Claims in cited Patent (US Patent 7,301,653)** (commonly owned w. at least one common inventor)
Claim 28 An image forming apparatus configured to be connected to a plurality of hardware resources by a system bus, including: **an image conversion unit** configured to process image data by software with a first conversion function to convert an image into a different format, and configured to access and to send the image data to a hardware image processing unit over the system bus that is configured to process the image data by hardware with at lease one second hardware conversion function; **a resource management unit** configured to determine a memory size required for one of the first conversion	Claim 1 An image processing apparatus, comprising: an image input part inputting image data; an image storage part capable of storing the input image data; an image output part outputting the image data stored in said image storage part; **a data format conversion part** performing conversion on the image data output by said image output part so that a data format of the image data is converted to a data format suitable for said image output part; **an SRC region reservation part** reserving an SRC region of a capacity in said image storage part, the SRC region storing the image data to be subjected to the

function or the at least one second hardware conversion function to convert the format of the image data; and an image data management unit acquiring a memory area corresponding to the memory size of the resource management unit, wherein the image conversion unit is further configured to access a register of the hardware image processing unit over the system bus to determine which ones of the at least one second hardware conversion functions are available for conversion of the image data.	conversion by said data format conversion part; a DST region reservation part reserving a DST region in said image storage part, the DST region storing the image data of the capacity after the conversion; a region division part dividing at least one of the SRC and DST regions into a plurality of regions; a first storing part storing the input image data in the SRC region; and a second storing part storing the image data after the conversion in the DST region.
Claim 31 The image forming apparatus according to claim 29, wherein the resource management unit is configured to set a hardware management flag based on the identification of the different types of at least one second hardware conversion functions by the **image conversion unit**, and the image data management unit is configured to acquire a memory area corresponding to an availability of the different types of at least one second hardware conversion functions, upon a request for image data conversion from an external device	Claim 6 The image processing apparatus as claimed in claim 1, further comprising an access control part performing access control between the image processing apparatus and an external apparatus, wherein said **data format conversion part performs the conversion on the image data in accordance with a conversion command issued from the external apparatus** and received by the access control performed by said access control part; and said access control part outputs the image data after the conversion to the external apparatus.
Claim 34 A method of acquiring a memory area for an image forming apparatus configured to be connected to a plurality of hardware resources by a system bus, at least one of the hardware resources being a hardware image processing unit having at lease one second hardware conversion function configured to convert a format of image data, the method comprising: accessing the hardware image processing unit over the system bus by an **image data conversion unit** to read a register of the hardware image processing unit, the register including information determining which ones of the at least one second hardware conversion functions are available for conversion of the image data; **determining a memory size** required for the at least one second hardware conversion function to convert the format of the image data; and **acquiring a memory area** corresponding to the memory size of said step of determining	Claim 7 An image processing method, comprising the steps of: (a) **performing conversion** on image data output from an image storage part by an image output part so that a data format of the image data is converted to a data format suitable for the image output part, the image data being input by an image input part and stored in the image storage part; (b) **reserving an SRC region** of a capacity in the image storage part, the SRC region storing the image data to be subjected to the conversion by said step (a); (c) **reserving a DST region** in the image storage part, the DST region storing the image data of the capacity after the conversion; (d) dividing at least one of the SRC and DST regions into a plurality of regions; (e) storing the input image data in the SRC region; and (f) storing the image data after the conversion in the DST region.
Claim 35 The method of acquiring a memory area for an image forming apparatus according to claim 34, further comprising: setting a hardware management flag based on the identification of the different types of available at least one second hardware conversion functions; requesting **image data conversion** from an external device; and acquiring the memory area corresponding to a number of available different types of at least one second hardware conversion functions based on said hardware management flag	Claim 9 The image processing method as claimed in claim 7, further comprising the step of (g) performing access control between an image processing apparatus and an external apparatus, wherein said step (a) **performs the conversion on the image data in accordance with a conversion command issued from the external apparatus and received by the access control performed by said** step (g); and said step (g) outputs the image data after the conversion to the external apparatus.

Claim Objections

11.   **Claims 28 and 34** are objected to under 37 CFR §1.75 (a), the claims fail to particularly

point out and distinctly claim the subject matter which Applicant regards as the invention.

12.   Claims 28 and 34 each recites the limitation "*a hardware image processing unit*" in the

claim, and considering Applicant's admission of supports provided by Applicant *(in 'Remarks'*

filed on October 29, 2007, Pg. 6, 5ᵗʰ Para.), pointing out the claimed limitation of "a hardware

image processing unit" is to be referring to "MLB (or media linked board)" as depicted in Fig. 1,

45 or Pg. 23, 3-24, the claims 28 and 34 are therefore each respectfully objected for usage of

inconsistent terminology or phraseology, which fails to *particularly* point out and *distinctly*

claim the subject matter which Applicant regards as the invention.   In addition, Examiner

respectfully suggests usage of consistent terminology or phraseology in claim languages

supported with ones from the original disclosure for avoiding any further unclarity. Applicant is

respectfully suggested to check for consistency of other claimed limitations with ones from the

original disclosure.

Claim Rejections - 35 USC § 112

13.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

14.   **Claims 30, 32 and 36** are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

15.   Claim 30 recites the limitations of *"an availability determination register"*, Examiner has not able to find any *explicit* disclosure supporting the limitations of *"an availability determination register"* from the original disclosure. Therefore, claim 30 is rejected for failing to comply with the written description requirement, at least until the further clarification from Applicant indicating that such limitations are indeed being *explicitly* disclosed in the original disclosure at the time of the application filed.

16.   Claims 32 and 36 recite the limitations of *"<u>reserve or reserving</u> a target memory size"*, Examiner has not able to find any *explicit* disclosure supporting the limitations of *"<u>reserve or reserving</u> a target memory size"* from the original disclosure. Therefore, claims 32 and 36 are rejected for failing to comply with the written description requirement, at least until the further clarification from Applicant indicating that such limitations are indeed being *explicitly* disclosed in the original disclosure at the time of the application filed.

17.   Claims 32 and 36 recite the limitations of *"modify or modifying a size of the target memory size by <u>an algorithm in</u> <u>a step-wise fashion</u>"*, Examiner has not able to find any *explicit* disclosure supporting the limitations of *""modify or modifying a size of the target memory size by <u>an algorithm in</u> <u>a step-wise fashion</u>"* from the original disclosure. Therefore, claims 32 and 36 are rejected for failing to comply with the written description requirement, at least until the further clarification from Applicant indicating that such limitations are indeed being *explicitly* disclosed in the original disclosure at the time of the application filed.

18.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

19.   **Claim 28-37** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

20.   Claim 28 recites the limitation "*a first conversion function*" in lines 3-4 of claim 28, and "*at least one second hardware conversion function*" in lines 6-7, it is unclear either "first conversion function" claimed is: solely performed by software, solely by hardware, or inclusive of performing by both software and hardware; whereas the recitation of "one second hardware conversion function", the difference from instant limitation from the prior-discussed conversion is unclear, and there is insufficient descriptions with related to such claimed limitations, the scope of such limitations are unable to be distinctly determined, which renders the claim scope indefinite. The issue also affects the dependent claims 29-33. Further clarification is required.

21.   Claim 28 further recites the limitation of "one of the first conversion function", there is insufficient antecedent basis for this limitation in the claim as there is no prior reciting of <u>more than one</u> of the first conversion function". Further clarification is required.

22.   Claim 34 recites the limitation of "*ones of the at least one second hardware conversion functions*", such a limitation has not been *explicitly* depicted with sufficient descriptions in the instant claim. The scope of such a limitation is unable to be distinctly determined, which renders the claim scope indefinite. This issue also affects the dependent claims 35-37.

Claim Rejections - 35 USC § 103

23.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

24.   **Claims 28-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Mitani</u>

(U.S. Patent No. 6,052,200) and further in view of <u>Shimizu</u> (US Patent No. 6,490,055).

With regard to claim 28, the claim is drawn to an image forming apparatus configured

to be connected to a plurality of hardware resources by a system bus, including: an image

conversion unit configured to process image data by software with a first conversion function to

convert an image into a different format, and configured to access and to send the image data to a

hardware image processing unit over the system bus that is configured to process the image data

by hardware with at lease one second hardware conversion function *(see <u>Mitani</u>, i.e. col. 1, ln 51*

- col. 2, ln 7, discloses, among the others, the teachings of data conversions); a resource

management unit configured to determine a memory size required for one of the first conversion

function or the at least one second hardware conversion function to convert the format of the

image data *(see <u>Mitani</u>, i.e. col. 1, ln 53-56, disclose the memory management method);* an image

data management unit acquiring a memory area corresponding to the memory size of the

resource management unit *(see <u>Mitani</u>, i.e. col. 1, ln 56-59, disclose the teaching of calculating*

the data size), wherein the image conversion unit is further configured to access a register of the

hardware image processing unit over the system bus to determine which ones of the at least one

second hardware conversion functions are available for conversion of the image data.

Mitani discloses an invention relates to preparation of printing data and the memory

management method used in the printing apparatus, and does not *explicitly* disclose the limitation

of processing the image data by software and by hardware conversion function specifically.

Examiner submits that processing or rendering of image data by both software and hardware

were common and conventional for one of ordinary skill in the art at the time of invention, as the

rendering processes are generally done by some sort of RIP (Raster Image Processor) with the

assistance of software application to increase the performance and reduce the processing costs

and time, or compensating the incapability in specific type of rendering processes by one and

another. Examiner further submits Shimizu for illustration the abovementioned limitation for

purpose of advancing the prosecution.

Shimizu discloses an invention relates to preparing, creating and rendering of print data,

and specifically disclose the teaching of a printing apparatus with execution of software

rendering and hardware rendering by disclosing an execution unit for executing fast hardware

rendering with a hardware for the intermediate information, and a switch for switching the fast

hardware rendering into a software rendering in the case of a high grade color logical drawing

which cannot be supported by hardware *(see Shimizu, i.e. "Abstract", col. 2, ln 60 - col. 3, ln 2).*

Further in details, i.e. in Fig. 10 of Shimizu, illustrates a flowchart showing an overview of the

rendering processes, and disclosing both "soft rendering 504" and "hard rendering 506" *(also see,*

i.e. Fig. 11 for details of "soft rendering" and Fig. 12 for details of "hard rendering"). In

addition, Shimizu also discloses the determining or detecting method for selecting the available

rendering or conversion path. As illustrated in Fig. 10, Steps 502 and 503, which Step 502 first

determine whether or not the input object is a drawing command, and later the result will be

"substituted into the global variable holding current information at step 505" *(col. 10, ln 1-7)*,

and followed by checking whether or not a "logical drawing mode" and further set "the state

flag" (either: if state flag is 1, the hard rendering is executed; if state flag is 0, the soft rendering

is executed) *(see col. 10, ln 8 - 35; also Fig. 11 and 12, and col. 10, ln 61 - col. 11, ln 46, for*

details of "soft rendering" and "hard rendering").

Therefore it would have been obvious to one of ordinary skill in the art at the time of

invention to have modified Mitani to include the limitation of processing the image data by

software and by hardware conversion function specifically from Shimizu. It would have been

obvious to one of ordinary skill in the art at the time of invention to have modified Mitani by the

teachings of Shimizu to include the limitation of processing the image data by software and by

hardware conversion function specifically, taught by Shimizu in the discussion above, thereby

providing "a color printing apparatus which can realize a color logical drawing at *lower cost* and

with a *certain precision"(see Shimizu,* i.e. col. 2, ln 28-32)*.

With regard to claim 29, the claim is drawn to the image forming apparatus according

to claim 28, wherein hardware image processing units with different types of at least one second

hardware conversion functions can be connected to the system bus, and the image conversion

unit is configure to identify the different types of at least one second hardware conversion

functions of the hardware image processing unit *(see Shimizu,* i.e. Fig. 10, disclose the*

determining steps of 502 and 503, setting "the state flag", further select or identify

corresponding rendering or conversion process), and to submit image data to the different types

of at least one second hardware conversion functions of the hardware image processing unit for

image processing *(see Shimizu, i.e. Fig. 10, Step 501, disclose inputting the object or the print data; Step 506, "hard rendering" for 'at least one second hardware conversion function').*

With regard to claim 30, the claim is drawn to the image forming apparatus according to claim 28, further comprising the hardware image processing unit connected to the system bus, wherein the hardware image processing unit includes: a first hardware image processing unit configured to compress the image data; a second hardware image processing unit configured to improve image quality of the image data *(see Mitani, i.e. col. 19, ln 15-18, discloses "compression process" and achieving printing with high resolution)*; and an availability determination register configured to be accessed by the system bus to indicate what second hardware conversion functions are available in the hardware image processing unit *(see Shimizu, i.e. Fig. 10, Steps 502-503 and 504 and 506).*

With regard to claim 31, the claim is drawn to the image forming apparatus according to claim 29, wherein the resource management unit is configured to set a hardware management flag based on the identification of the different types of at least one second hardware conversion functions by the image conversion unit, and the image data management unit is configured to acquire a memory area corresponding to an availability of the different types of at least one second hardware conversion functions, upon a request for image data conversion from an external device *(see Mitani, i.e. col. 1, ln 53-65, memory management step).*

With regard to claim 32, the claim is drawn to the image forming apparatus according

to claim 31, wherein the image data management unit is further configured to reserve a target

memory size, and as a function of the availability of the different types of the at least one second

hardware conversion functions in the hardware image processing unit, is configured to modify a

size of the target memory size by an algorithm in a step-wise fashion *(see Mitani, i.e. col. 1, ln*

53 - col. 2, ln 15).

With regard to claim 33, the claim is drawn to the image forming apparatus according

to claim 32, wherein the image data management unit is further configured to increase the target

memory size as a function of the hardware management flag, so as to provide more memory than

the target memory size for an increased number of available second hardware conversion

functions *(see Mitani, i.e. col. 12, ln 19-26, discloses deleting the intermediate data, thereby*

gaining a vacant memory sufficient for storing data to be processed in the RAM).

With regard to claim 34, the claim is drawn to a method of acquiring a memory area for

an image forming apparatus configured to be connected to a plurality of hardware resources by a

system bus, at least one of the hardware resources being a hardware image processing unit

having at lease one second hardware conversion function configured to convert a format of

image data, the method comprising: accessing the hardware image processing unit over the

system bus by an image data conversion unit to read a register of the hardware image processing

unit, the register including information determining which ones of the at least one second

hardware conversion functions are available for conversion of the image data *(see Shimizu, i.e.*

Fig. 10, Steps 502-503 and 504 and 506, "soft rendering" and "hard rendering"; and discussion of claim 28 above); determining a memory size required for the at least one second hardware conversion function to convert the format of the image data; and acquiring a memory area corresponding to the memory size of said step of determining *(see Mitani, i.e. col. 1, ln 53 – to col. 2, ln 15, memory management method; and the discussion of claim 28 above)*.

With regard to claim 35, the claim is drawn to the method of acquiring a memory area for an image forming apparatus according to claim 34, further comprising: setting a hardware management flag based on the identification of the different types of available at least one second hardware conversion functions *(see Shimizu, i.e. Fig. 10, Steps 502 and 503 and col. 10, ln 8-35, "the state flag")*; requesting image data conversion from an external device *(see Shimizu, i.e. Fig. 1, Block 1, "Host Computer")*; and acquiring the memory area corresponding to a number of available different types of at least one second hardware conversion functions based on said hardware management flag *(see Mitani, i.e. col. 1, ln 53 – to col. 2, ln 15, memory management method; and the discussion of claim 28 above)*.

With regard to claim 36, the claim is drawn to the method of acquiring a memory area for an image forming apparatus according to claim 35, further comprising: reserving a target memory size *(see Mitani, i.e. col. 1, 1n 53 - col. 2, ln 15)*; and modifying a size of the target memory size with an algorithm in a step-wise fashion based on said hardware management flag *(see Mitani, i.e. col. 12, ln 19-26, discloses deleting the intermediate data, thereby gaining a vacant memory sufficient for storing data to be processed in the RAM)*.

With regard to claim 37, the claim is drawn to the method of acquiring a memory area

for an image forming apparatus according to claim 36, wherein said modifying further

comprising: increasing the target memory size as a function of the hardware management flag, so

as to provide more memory than the target memory size for an increased number of available

second hardware conversion functions *(see Mitani, i.e. col. 12, ln 19-26, discloses deleting the*

intermediate data, thereby gaining a vacant memory sufficient for storing data to be processed in

the RAM).

Response to Arguments

25.   Applicant's arguments with respect to claims 1-27 and 28-37 have been carefully

considered but are moot in views of cancellation of claims 1-27 and the new ground(s) of

rejection.

Conclusion

26.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

  A. Shindoh et al. (U.S. Pub. No. 2004/0233466 A1, RICOH), disclose an electronic device

        for transfer of image data.

  B. Shindoh et al. (U.S. Pub. No. 2004/0190037 A1, RICOH), disclose an image processing

        apparatus, including; inputting, storage, outputting and conversion parts.

  C. Kizaki et al. (U.S. Pub. No. 2005/0157322, RICOH), disclose an apparatus for

        transforming image format of image data.

D. <u>Shimizu et al.</u> (U.S. Patent No. 5,987,230) disclose an information processing apparatus

    has a derivation which derives a usable memory size, and a controller which determines a

    default value of the memory to be used according to the derived size.

E. <u>Kimura et al.</u> (U.S. Patent No. 5,978,561) disclose an image forming apparatus for

    controlling a supply of divided image data to print means.

F. <u>Morikawa et al.</u> (U.S. Patent No. 6,876,466) disclose an image processing system

    includes a memory for storing image data of a plurality of pages (i.e. claim 1).

G. <u>Suzuki et al.</u> (U.S. Patent No. 6,463,445) disclose a multimedia information retrieval

    system and method, particularly "the format conversion process" automatically

    determines the computer memory size required to perform the transcoding processing,

    thereby saving the computer memory resources.

H. <u>Sawano</u> (U.S. Patent No. 7,019,854) discloses a control means for controlling memory

    means and an output section is provided in a printing system.

I. <u>Kumada</u> (U.S. Patent No. 5,495,560) discloses an output apparatus which temporarily

    stores pattern data for output.

J. <u>Taoda</u> (U.S. Patent No. 6,480,295) discloses an invention relates to a print control

    method in which code data such as PDL is converted into image data and printing is

    carried out.

K. <u>Minamizawa</u> (U.S. Patent No. 6,208,434) discloses an invention permits copying of

    multiple documents when only a small amount of memory is available.

L. Yamashita et al. (U.S. Pub. No. 2002/0019914 A1) disclose a signal processor comprises

a plurality of processing with a plurality of kinds of processors and a shared memory

accessed through a versatile control means.

27.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

28.   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

29.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jacky X. Zheng whose telephone number is (571) 270-1122. The

examiner can *normally* be reached on Monday-Friday, 7:30 a.m.-5p.m., Alt. Friday Off.

30.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Twyler M. Lamb can be reached on (571) 272-7406. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

31.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacky X. Zheng/
_____
Examiner, Art Unit: 2625
July 29, 2008

/Twyler L. Haskins/
Supervisory Patent Examiner, Art Unit 2625